

SAN et al. -- Appl. No. 09/855,641

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REMARKS/ARGUMENTS

Claims 80-82 and 84-223 are currently of record pending continued examination under 37 C.F.R. §1.114. By this amendment, claims 80-97, 154-185 and 206-223 are canceled without prejudice or disclaimer. The Abstract is amended to more closely reflect the subject matter of the pending claims. No new matter has been added. Continued examination and reconsideration of all non-canceled claims remaining of record is respectfully requested.

Claims 98-153 and 186-205 currently stand rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over commonly assigned U.S. Patent No. 6,646,653 (the '653 patent). Applicants respectfully traverse this rejection for at least the following reasons:

Applicants' claims 98-153 and 186-205 are directed toward a "*home video game system* for use with a *television type monitor display*" and specifically require, among other things, a "game processor" and a graphics processor for the *rendering* of polygon-based 3D objects. These particular features are not recited in the claims of the '653 patent nor are these features obvious from the context of the '653 patent claims. Accordingly, Applicants respectfully contend that currently pending claims 98-153 and 186-205 are patentably distinct over the claims of the '653 patent at least because of recited features that require a home video game system for use with a TV monitor, a housing having an insertion port for a removable memory device and the rendering of polygon-based 3D objects.

Claim 135 stands rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent 5,016,876 to Loffredo in view of U.S. Patent 5,190,285 to Levy et al. Applicants respectfully traverse this rejection for at least the following reasons:

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The 6/13/2006 Final Office Action alleges that Loffredo (referencing Figure 1 of the Loffredo '876 patent) discloses a programmable graphics processor (i.e., "a digital computer 22") and a main processor ("DMA coprocessor 130") that communicates information relating to one or more polygon-based 3D graphic objects to the programmable graphics processor. The Office Action further alleges: "Loffredo discloses that the DMA is a digital coprocessor to other processor such as digital computer 20. Thus, either DMA or digital computer can be called as a main processor." Applicants respectfully traverse the 6/13/2006 Final Office Action characterization of Loffredo's DMA (Direct Memory Access) co-processor (130 in Figure 1 of the '876 patent) as a "main processor" or as a "game processor". Loffredo's DMA co-processor can not function or be used as either a "main processor" or as a "game processor" as set forth by Applicants' claims. Moreover, Loffredo's DMA co-processor does not perform the functions of a "graphics processor" as also required by Applicants' claims.

Loffredo does not disclose a home video game system having a game processor for executing at least a portion of a game program together with a separate programmable graphics processor in the same home video game system for rendering polygon-based 3D graphic objects, as required by applicants' claims. To the contrary, the Loffredo '876 patent is directed toward a *video display Direct Memory Access (DMA)* processing circuit (130 in Figure 1 of the '876 patent) that works with a graphics processor (GSP 22) to allow rapid access to memory to provide the ability to overlay successive planes of image data at a sufficiently rapid rate to provide real-time animation effects. (See, for example, '876 patent at column 9, lines 31-37 and Figure 1.) Although characterized as a "co-processor" by Loffredo in the '876 patent, the DMA 130 circuit is not a co-processor in the sense of a game program processor or a 3D graphics processor. It is a "co-processor" only in the sense that it works in conjunction with another

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processor, the GSP, to provide enhanced direct memory access capabilities to allow real-time animation of a composite scene. (See, for example, '876 patent at column 3, lines 21-40). There is no teaching or discussion by Loffredo disclosing the operation or capabilities of GSP 22 or of any main processor or other "game processor" that works with GSP 22 for executing at least a portion of a game program, as set forth in applicants' claims. Moreover, it is clear that Loffredo's DMA "co-processor" can not function as a "main processor" for executing at least a portion of a game program nor can it function as a "programmable graphics processor", as set forth in applicants' claims. Applicants' independent claim 135 clearly requires both a game program processing unit for executing at least a portion of a videographics program *and* a programmable graphics processor connected to the game program processing unit for receiving information relating to one or more polygon-based 3D graphic objects.

Moreover, Applicants' claim 135, as presently amended, further requires "a game program processing unit for executing at least a portion of a videographics program that includes instructions for drawing one or more trapezoids for constructing and displaying polygon-based 3D graphic objects". Neither the Loffredo '876 patent nor U.S. Patent 5,190,285 to Levy et al., considered either alone or together, teach or suggest a home video game system having a game processing unit for executing at least a portion of a game program that includes instructions for drawing one or more trapezoids *and* a separate programmable graphics processor unit connected to the game program processing unit for receiving information relating to one or more polygon-based 3D graphic objects, as set forth in Applicants' claims and the claims dependent thereon. Accordingly, it is respectfully submitted that Applicants' claim 135 and the claims dependent thereon are patentably distinct over the combined teachings of Loffredo and Levy et al.

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Claims 98-134, 136-153 and 186-205 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Loffredo in view of Levy et al. and further in view of a PC TECH Journal publication by McNierney. Applicants respectfully traverse this rejection for at least the following reasons:

The McNierney reference is cited for its review of the Texas Instruments TMS34010 processor architecture. However, there is no teaching or suggestion by McNierney of providing a home video game system having a game program processor for executing at least a portion of a game program *and* a separate programmable graphics processor for rendering or for receiving information relating to one or more of polygon-based 3D graphic objects, as set forth in Applicants' independent claims. Likewise, as pointed out above, although Loffredo suggests use of the TMS34010 processor as a Graphics System Processor, there is also no teaching or suggestion by either Loffredo or Levy et al., considered either alone or together, of a game program processing unit for executing at least a portion of a videographics program *and* a separate graphics processor connected to the game program processing unit for rendering a polygon-based 3D graphic objects or for receiving information relating to a polygon-based 3D graphic object from the separate game program processing unit, as set forth in Applicants' independent claims. As such, the combination of Levy et al., Loffredo and McNierney clearly do not teach or suggest a home video game system as set forth in Applicants' claims 98-134, 136-153 and 186-205 .

In addition, at least with respect to Applicants' independent method claims 186, 202 and 204, neither Levy et al. nor Loffredo, nor McNierney, considered either alone or together, teach or suggest performing operations for rotation and/or scaling 3D graphic objects or for producing 3D graphics display effects utilizing rotated and/or scaled polygon-based graphic objects, as set

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forth in those claims. Consequently, it is respectfully submitted that all of Applicants' non-canceled pending claims are patentable over the combined teachings of Levy et al., Loffredo, and McNierney.

In view of Applicant's foregoing remarks and current amendments to the claims, it is believed that the application is in condition for allowance. Favorable consideration and allowance of this application are respectfully solicited. If any small matter remains outstanding, the Examiner is encouraged to telephone Applicants' representative at the telephone number listed below or on the following page.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 

William G. Niessen
Reg. No. 29,683

WGN:ap
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

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